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# ESTABLISHMENT OF PROJECT SUPPORT GROUP FOR DEVELOPMENT OF SMALL RENEWABLE ENERGY PROJECTS, FOCUSING ON BIOMASS ENERGY

# TERMS OF REFERENCE

## 1. PROJECT BACKGROUND

*<Rationale for the project, project history, technical background, need for technical assistance.>*

## 2. TECHNICAL BACKGROUND

*<Brief description of current pipeline of mini hydro and biomass power subprojects, with emphasis on bagasse cogeneration in sugar mills.>*

## 3. OBJECTIVES OF THE TECHNICAL ASSISTANCE

The objective of this technical assistance is to promote the development of renewable energy projects by lowering the major constraints such as high pre-investment costs and information barriers confronted by the sector. It is expected that this TA will facilitate the execution of about 100 MW of such projects over the four-year Project implementation period, including projects that are not financed by the Project.

## 4. APPROACH

A Project Support Group (PSG) will be set up and funded by the Project for a 4 year period to facilitate project implementation under the Project. The developers such as the sugar mill owners, will have primary responsibility for executing their power projects, including signing the standard power purchase contract with the utility, preparing feasibility studies, reaching financial closure with the commercial banks and project implementation.

The PSG will consist of a Manager-Team Leader assisted by technical experts with proven and substantial experience in small power project development with specific experience in cogeneration projects in the sugar industry. At a minimum, it is expected that the PSG will provide the following services:

* Facilitation of development and financial closure of projects to be financed under the Project, which will require familiarity with the sugar industry, and ability to work effectively with the project developers, banks and the utility.
* Technical cogeneration advice to developers, which will require expertise in biomass cogeneration project development and international small power development experience.
* Assessment of environmental compliance, which will require experience with environmental regulations, and explicitly with those regulations relevant for the sugar industry.
* Short-term technical expertise as needed in specific areas, such as resettlement, (which would require experience in local and [Donor] policies on resettlement and compensation as well as with practical experience in preparing land acquisition, compensation and resettlement plans) agro-industrial processing, power generation, small hydro, business development, financial analysis etc.
* Office support.

## 5. SCOPE OF WORK

The PSG specific assignments would fall into the following broad categories:

* Task 1 - Advisory services in support of technical preparation and preparation of environmental assessment/compliance, and land acquisition, resettlement and compensation reports.
* Task 2 - Administration of a grant funded project preparation facility.
* Task 3 - Facilitation, information provision and dissemination.

### Task 1 - Advisory Technical Services.

The PSG will advise project developers in preparing and bringing to financial closure the Group 1 and 2 projects and other renewable energy that may arise in the future. The work would be in the following areas:

* Advise developers in preparation of conceptual designs, hardware specifications and equipment sourcing, cost estimates and schedules; financial feasibility verification and preparation of financing plans.
* Prepare Environmental Review and Compliance Reports (ECR). The projects to be developed under the Project must meet all of the national environmental emission/effluent standards that apply both to the power project and to the entire facility where the power project will be implemented. To help developers meet these requirements the Project will provide environmental assessment assistance to project developers.
* For the limited number of projects where resettlement may be an issue, prepare Land Acquisition, Compensation and Resettlement Reports, as required by the Government.
* Assistance in coordination of the developer’s activities with participating commercial banks, the utility and the Government.

### Task 2 - Administration of a Grant-funded Project Preparation Facility to Support Pre-investment Activities.

Grants of [Budget] per project for up to 15 projects will be given to support pre-investment activities. The grants are primarily intended to support Group 2 projects but are also expected to assist in the pre-investment work of other renewable energy small power projects identified during the course of the Project under Task 3. The responsibilities of the PSG will include the following:

* Preparation of the grant fund operating procedures.
* Assistance to project developers to define requirements for services, preparing Terms of References and budgets, reaching agreement on grant support, and selecting consultants. The project developers will be responsible for selecting and contracting for consultant services.
* Maintenance of grant disbursement accounts.
* Recommend the grant amount for pre-investments associated with subprojects to be financed by the Project.

### Task 3 - Facilitation, Information Provision and Dissemination.

The PSG would facilitate contacts between potential project developers, equipment suppliers, engineering service providers and financiers and conduct limited amount of information dissemination to sectors other than sugar industry - such as palm oil and other agro-industries, small hydro, geothermal etc. A second aspect of this task is to augment the project pipeline already identified. The new projects will include biomass cogeneration projects other than in the sugar industry, mini-hydro, wind, mini-geothermal etc.

## 6. REPORTING

Within one month of start-up an inception report will be submitted. Grant fund project preparation facility operating procedures within two months of PSG start-up.

Quarterly reports to the Government and the [Donor] on the schedule and status of work undertaken/supported and project preparation facility operation. The reports will include summaries of feasibility and other studies performed or co-funded on behalf of the developers.

Environmental Compliance and Land Acquisition, Resettlement and Compensation Reports for [Donor] clearance.

## 7. STAFFING

A PSG Manager-Team Leader will be required for a total of 36 person-months (see Annex 1 for the Terms of Reference and other details). The biomass cogeneration technical expert will be required for a total of 24 person-months; the cogeneration expert must have demonstrated international power project development experience, particularly in cogeneration projects in the sugar industry (see Annex 1 for the Terms of Reference and other details). An environmental specialist will be required for a total of 15 months on a periodic basis over the entire life of the Project. Other local/foreign technical experts will be provided on an as-needed basis for a total of about 15-20 person-months; the expertise potentially required under this category includes electrical distribution engineer, solid fuels/supplementary biomass fuels specialist, resettlement expert, etc.

## 8. PERIOD OF PERFORMANCE

The PSG will be functional during the four years of the Project.

## Annex 1

### MANAGER-TEAM LEADER AND COGENERATION TECHNICAL EXPERT OF THE PROJECT SUPPORT GROUP

### TERMS OF REFERENCE

#### Manager-Team Leader

The Manager-Team Leader, Project Support Group will have overall responsibility for (i) facilitating the development and financial closure of the biomass cogeneration and mini-hydro projects in the pipeline, and (ii) managing the PSG over the four-year Project implementation period.

##### Major Responsibilities:

The Manager-Team Leader will:

1. Set up and manage the PSG and its office and logistical arrangements. This will include establishing internal organizational, operating, financial and reporting procedures.
2. Manage the PSG activities of project development assistance, environmental compliance reporting and business development advisory services.
3. Work closely with the project developers, the utility and participating banks to facilitate project development and financial closure.
4. Identify mini-hydro projects not identified in the pipeline, and identify new biomass cogeneration projects to be financed under the Project, in the event that some of the projects identified in the pipeline fail to be developed.
5. Manage the facilitation, information provision and dissemination activities.
6. Be responsible for reviewing and approving the grant applications by the developers in the project pipeline, taking into account the recommendation of the biomass cogeneration expert, and subsequent requests for grant disbursements.
7. Meet as necessary with the Ministry in charge of Energy, the utility, developers and participating banks and fulfill reporting obligations of the PSG.

##### **Qualifications:**

The Manager-Team Leader will be a seasoned, senior business development professional who meets the following requirements:

1. University graduate with post graduate or professional qualification in business management, science or engineering desirable.
2. Minimum of ten years of management and business development experience, with demonstrated skill in business development and bringing projects to financial closure.
3. Working knowledge of the sugar industry.

Timing: The services of the Manager-Team Leader are required for full-time the first 24 months, and for about 12 months periodically over the next two years, i.e., a total of 36 person-months over the Project implementation period of 48 months.

#### Biomass cogeneration technical expert

The biomass cogeneration technical expert will be responsible for providing technical advice that will facilitate the execution of the identified pipeline of biomass cogeneration projects.

Major Responsibilities: The biomass cogeneration technical expert will:

1. Provide technical advice to and work closely with project developers identified in the Project pipeline in preparation of conceptual designs, conducting pre-feasibility and feasibility studies, hardware specifications and equipment sourcing, cost estimates and schedules.
2. Assist project developers with technical and financial feasibility verification.
3. Assist the project developers in preparing their [Donor] grant applications, and assist the Team Leader in reviewing and approving these applications.
4. Identify new biomass cogeneration projects to be financed under the Project, in the event that some of the projects identified in the pipeline fail to be developed.
5. Meet as necessary with Government counterparts, the utility, developers and participating banks.

Qualifications: The biomass cogeneration technical expert will be a senior expert who meets the following requirements:

1. University graduate with post graduate or professional qualification in science or engineering. Additional qualification in business management with a MBA degree or equivalent preferred.
2. Minimum of ten years of international experience with proven expertise in small power project development and biomass cogeneration as well as experience in the sugar industry is essential.

Timing: The services of the international cogeneration technical expert are required full time for the first 18 months, and for about six months periodically over the next two years, i.e., a total of 24 person-months over the Project implementation period of 48 months.